COTTON CHATS

DRAPER CORPORATION
HOPEDALE, MASSACHUSETTS

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"I WOULD NOT HAVE THEM IN MY MILL."

He was a successful manufacturer. That means that he had kept abreast of the times. He never had hesitated to scrap out-of-date machinery and buy new. Sometimes he had stopped to count the cost and found the new would pay for itself in a comparatively short time; sometimes the new meant so much in improved methods and production, he realized he must have it and had not stopped to figure it out.

He gave his help good machinery. He expected results. He got them—and along with them low manufacturing costs and a consequent volume of profitable business that had made his success.

A big expenditure for machinery a little better than that of his competitors! That never bothered him. Faced with such a problem, his business acumen unerringly and unhesitatingly dictated the answer.

Big things he was not afraid of. Little things—what did he have superintendents and overseers for but to attend to these?

His danger—like that of a great general on the field of

battle or a captain of industry in the crises of modern industrial competition—was that a little thing might really be a big thing.

The subject of conversation was brass-bushed filling bobbins for Northrop looms. His answer was just as given above, short, sharp and decisive, every word monosyllabic and Anglo-Saxon.

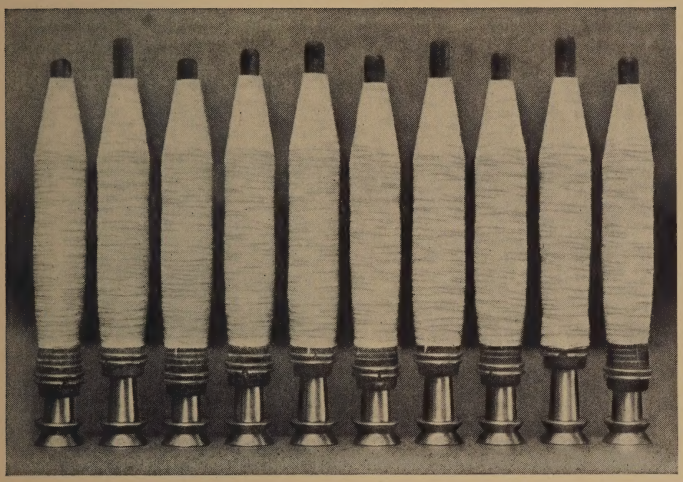
He had reached a snap judgment—perhaps on someone's chance remark or an unthoughtful decision of a subordinate, accepted without question, because bobbins appeared to him to be a little thing of no great moment in his manufacturing methods.

The man to whom he made the remark was also a successful manufacturer. He was moved to tell a story. He knew it was a good one, for it was a story of actual experience, a story of difficulties met and overcome; it would prove that little things like bobbins may become big things through improvements that effect large economies.

AN EXPERIENCE STORY

"I was not getting as large a production," he said, "and was making more seconds than I thought should be the case in my mill, which was modern in equipment and well organized. I called in my superintendent and put the proposition up to him. This is the substance of the report he made to me.

"The weaver blames the spinner, naming soft bobbins, bobbins only partly filled with yarn, bobbins with yarn wound on the butts, and bobbins with yarn started too far from the butts to allow his feelers to function properly; and defective bobbins, some with loose rings and others with small butts, changes effected by the regular mill processes.



"A glance at the uneven standing of the bobbins on the spindles on the side of any frame showed me the blame did not belong to the spinner."

"A few minutes in the spinning room and a glance at the uneven standing of the bobbins on the spindles on the side of any frame showed me the blame did not belong to the spinner.

"I tried the brass-bushed bobbin—designed as I was told to overcome this trouble; found the spinning and weaving troubles of which complaint had been made had disappeared; and secured my desired increase in production and decrease in seconds. Only bobbins with brass bushings are now used in my mill."

IMPROVEMENTS IN FILLING YARN

Modern competition, national and international, makes it necessary for manufacturers to watch for chances to improve conditions in every way that leads to either reduced costs or greater production per unit of labor and per dollar of wage expense.

The advent of the Northrop loom aroused the textile industry to the great possibilities of improvements in the

preparation of warp yarns. Efforts in that field have been crowned with marked success to the benefit of the entire industry.

Much less has been done for filling yarns.

Perhaps this was because the magazine made such a radical change in the handling of filling in the loom that there appeared to be nothing further in that direction to be attained. But as the 12 and 16 loom weaver has given place to the 20, 24 and 32 loom weaver, and more recently on some kinds of goods to the 36 and even 48 loom weaver; as battery hands have been more generally employed; as the increased use of the feeler mechanisms for matching the pick and demand for cloth more nearly perfect have become the vogue in the trade; as longer bobbins and more yarn on the bobbins have shown that the capacity of the loom battery was none too large to keep up with the advancing procession of improved methods, the quality and quantity of filling on the bobbin have become of the utmost importance and called for improvements in the preparation of filling yarns.

The brass-bushed bobbin, designed to aid in meeting these demands, is one of the most important improvements in the filling yarn field.

A STORY ABOUT NORTHROP LOOM BOBBINS

Bobbins, being made of wood, have always been subject to external and internal variations in size due to the effect of atmospheric conditions. Heat, water, steam and humidity, all of which have their necessary part to play in the process of spinning, conditioning and weaving, act directly upon the bobbins to change the outside and contract the opening where the bobbin fits upon the spindle whorl.

Interior variations in the bobbin cause a variety of troubles in the spinning room, the effects of most of which appear in the weave room to handicap and reduce production; exterior variations in the butt of an automatic loom bobbin cause loom troubles that reduce output and increase seconds.

BOBBINS CHANGE AND TROUBLE BEGINS

Each of two or three rings on the butt of an automatic loom bobbin, if properly made and tempered, exerts a constant pressure of 70 pounds. This outside pressure holds the butt so firmly that changes in the bobbin due to humidity result in the closing in of the hole in the base of the bobbin.

Bobbins with spindle holes of varying sizes will set at different heights on the spindles on the frame. The rail must be started for the bobbins that set highest on the spindles or the yarn will be wound upon the butts of the high bobbins, a frequent cause of a smash in the loom. If started for the high bobbins, all the bobbins have less yarn on them than if filled to the full length of the traverse, which means increased expense in doffing and more work in filling the loom batteries.

To prevent these troubles, bad bobbins are constantly being thrown out and reamed. To watch for and pick out these bobbins is one cause of expense. The reaming is another.

The reaming takes off any protecting coat on the bobbins as originally made and opens up the pores of the wood for direct and speedy action by water and steam. Thus reamed bobbins, put into use again, last a shorter time than new ones; and the time to each succeeding reaming is ever shorter and shorter.

REAMER DOES NOT KEEP BOBBINS UNIFORM

Experience proves that eternal vigilance and frequent use of the reamer does not keep the bobbins uniform, and consequently there are few mills with old-style bobbins whose frames do not show considerable variation in the setting of the bobbins on the spindles—with consequent reduction of the quantity of yarn on all bobbins or the danger of smashes from butts covered with yarn.

After several reamings another trouble develops. As the wood is cut away on the inside, the pressure of the rings forces the wood in and the butt is reduced in size. This means smaller rings, and in time loose rings.

Loose and smaller rings cause smashes and other troubles because of bobbins held improperly in the shuttle; and unfavorably affect the transfer mechanism of the battery. A transferrer set to drive bobbins with full-sized rings into the shuttle spring will sometimes drive a bobbin with smaller rings clear through. The two sizes in a loom battery are bound to reduce both production and quality.

Another trouble of the old-fashioned bobbin is the split butt. A bobbin with a split butt invariably rises on the spindle, runs at less speed than the others and is filled with slack yarn.

TROUBLES OVERCOME

All of these troubles are overcome with the brass-bushed bobbin.

Held firmly between the bushing and the outside rings, the butt of the bobbin cannot close in. Except for such

slight variations as come in the top of the bobbin, there is no occasion for reaming, all of the bobbins set at the same height on the spindles of the spinning frame and are filled with yarn to the full length of the traverse.

For top troubles we have a top bushing. Some mills find this a decided advantage; some do not need it. With bushings in both bottom and top of the bobbin, all necessity of reaming disappears.

Enamelled bobbins need brass bushings even more than the common kinds. Practically all moisture has been taken out of the wood by baking. When the enamel wears or cracks, this super-dry wood sops up the moisture and the wood swells and closes in. Reaming opens up the pores, and the bobbin is quickly destroyed unless it is given a new coat of enamel after the reaming. On all orders for enamelled bobbins we recommend the use of the brass bushing.

To summarize:

The brass bushing adds greatly to the life of the bobbin.

Experience shows that this longer life of the bobbin alone shows a profit on the extra cost of the bushing.

It eliminates many spinning room troubles.

It insures more yarn on the bobbin—increased spinning room production at less expense for doffing.

More yarn on the bobbin reduces the number of bobbins that must be placed in the loom battery in the course of a year.

Where feelers call for bunches of yarn on the bobbin, it keeps the bunches in a uniform position—a great saving in waste.

All feelers require that the yarn on the bobbins shall start at very nearly the same place. It will, therefore, improve the functioning of all feelers.

FIGURE OUT THE COST

In short, the brass-bushed filling bobbin is an improved tool. It costs about one-sixth more than the inferior tool. If you hesitate to give your spinners and weavers this improved tool, try one or more of the following suggestions.

Compare the average life of your old-style bobbins with that of the brass-bushed bobbins in some mill with similar spinning and weaving conditions.

Look over your supply of filling bobbins as sent to the weave room, and your spinning frames, where the comparison will be striking, and see the percentage of yarn they contain in comparison with what you would have with all bobbins filled to the full length of the traverse.

Figure what this increase in yarn would mean in reduced costs in your spinning and weaving.

Ask your overseer of weaving what troubles he is having from partly filled bobbins.

If he is running a feeler on part or all of his looms, ask him how these partly filled bobbins affect the operation of that mechanism.

Ask him how much more waste he is making than he would if the yarn started evenly on all his bobbins.

Ask him how many bobbins he finds with yarn wound over the butt and rings, and what these bobbins do to his weaving.

Ask him about loose rings on the bobbins and how bobbins with rings of varying sizes reduce his production and increase his seconds.

Figure out what it costs per year to ream your present bobbins.